Remarks

The present Response is to the Office Action mailed 06/25/2008, made final. Claims 23-46 are presented for examination.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d) (1) and MPEP § 608.01(0). Correction of the following is required: The limitation of claim 27 "measuring device" is not presented in the specification.

Applicant's response:

Applicant herein cancels claim 27. Therefore, the rejection should be withdrawn.

Claim Objections

6. Claim 44 is objected to because of the following informalities: "the system" should be change to "the method". Appropriate correction is required.

Applicant's response:

Applicant herein amends claim 44 to remove "the system" language, therefore the objection should be removed.

Claim Rejections - 35 USC § 112

7. Claims 27 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation of "measuring device" is unclear ad to what this limitations is trying to encompass. Further, the specification does not give a thorough understanding of what this measuring device is and how it is

used in conjunction with the situation model. Hence, for the purposes of compact prosecution the limitation was interpreted to mean a microphone for picking up a speech signal.

8. Claims 33 and 35 are rejected as being dependent upon a indefinite base claim.

Applicant's response

Applicant herein cancels claims 27 and 39 and amended claim 33 to depend from claim 26. Further, applicant points out that claim 35 is an independent method claim.

The Examiner continues

9. As to claim 31, the limitation "adapted': is held to be indefinite since it suggests optional language. See MPEP 2111.04.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Applicant's response

Applicant herein amends claim 31 to remove the "adapted" language.

The Examiner continues

10. Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention. The limitation in claim 35 recites the limitation of ""executing from a digital storage media in a computing appliance," which was not disclosed in the original application as filed on 05/10/2005.

11. Claims 36-46 are rejected as being dependent upon a rejected base claim.

Applicant's response

Applicant argues that throughout the specification of the present invention reference is made to software function, processing and modules. Applicant's specification states, "Thus the present invention makes possible an interface between human and machine that can convey the human instructions in their meanings to a machine, whether the latter is an entire factory, an air control system, are simply a computer, so that the machine is afforded the capability of comprehending instructions and the like in their meanings, i.e., in their reciprocal relationships with the current situation, and of realizing them appropriately. In this manner, the present invention creates an immediate link between human and machine that operates without other external influences." Therefore, a computerized machine and software functions are clearly disclosed in the specification.

Applicant argues that the terminology of "executing from a digital storage media in a computing appliance" is inherently included when operating software code in a computerized machine. Applicant argues that the 112 statement above states that, "The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention." Applicant argues that art unit, 2626, of the present Office Action, as classified by this Examiner includes, "DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS, LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION." Is the Examiner sincerely of the position that one of ordinary skill in the art of 2626 would understand that the teaching of a computerized machine with software executing from it does not include a digital

memory media? Applicant challenges the Examiner and the U.S.P.T.O. to provide one reference which executes software locally from a computer without utilizing a digital memory media. Clearly, the Examiner's 112 rejection is disingenuous as is the practice at the USPTO of requiring that Examiners assert this type of 112 rejection. Applicant also argues that this new "practice" of asserting said 112 rejection evolved at the Office after the filing of the present application, therefore, it should not apply in the present case for at least that reason. Therefore, applicant respectfully requests the rejection be withdrawn.

Claim Rejections - 35 USC § 103

13. Claims 23, 25, 26, 34, 35, 37, 38, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mast *et al.* ("Speech Understanding and Dialog System with a Homogeneous Linguistic Knowledge Base").

As to claims 23 and 35, Mast teaches a language-processing system comprising:

an input for language in text or audio, as a message (see page 180, left column, sect. II. 1st paragraph, user utterance is understood.);

an extractor (see page 184, left column, 1st paragraph, semantic network) operating to separate words and phrases from the input, to consults a knowledge base (see page 180, left column, II, 2nd and third paragraphs, morpho-syntactic knowledge, syntactic semantic knowledge, page 180, right column, 1st two paragraphs, pragmatic knowledge and dialogue knowledge), and to assign a concept to individual ones of the words or phrases (see page 184, left column, III, A, 1st paragraph, knowledge base and procedural knowledge used. see Figure 5, describing the connections of inquiries, and Figure 6), describing network of links and see page 188, left column, B, 2nd and 3rd paragraphs where analysis of user input is performed.); and

a connector operating to link the concepts to form a statement (see page 183, left column 4, 2), 1st and second paragraphs and dialogue, system determines the user request based on semantics and a dialogue model).

However, Mast does not specifically teach the use of an input.

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the language processing as taught by Mast *et al.* with the use of an input device for the purpose of communicating with the system for establishing a dialog (see Mast, page 179, left column, 1st paragraph).

Applicant's response:

Applicant herein amends independent claims 23 and 35 to clarify language which may be viewed as broad or vague and to simplify the language-processing system presented for examination. Claim 23, as amended, reads as follows:

23. (Currently amended) A language-processing system comprising:

a computerized appliance having user input and output interfaces, one or more processors, and one or more machine-readable media accessible to the one or more processors; and

operating code executed by the one or more processors from the one or more machine-readable media for processing text and audio messages;

wherein text and audio messages input to the system are separated into words and phrases to be considered individually, meaning is determined for individual ones of the words and phrases, resulting in statements of meaning, and the resulting meaning statements are linked, providing meaning for the message.

Applicant argues that Mast fails to teach both audio and text input. The Examiner states, "Mast teaches a language-processing system comprising: an input for language in **text** or audio, as a message" is not correct. The corresponding passage in Mast (*page* 180, first paragraph) reads: "For understanding a user utterance ..." The

entire document of Mast clearly refers exclusively to an acoustic dialogue system. "Input for language in text or audio" is nowhere mentioned.

Page 188, section B of Mast including acoustic and linguistic analysis teachings are completely irrelevant to the limitations claimed in the present invention. The entire disclosure of Mast fails to teach any kind of acoustic analysis. The system of Mast clearly is limited to analyzing text. Any verbal utterances are transformed into text by speech recognition system, for example. The present invention analyses and manipulates audio. Mast fails to teach this feature, as claimed.

Applicant argues that Mast fails to teach or suggest that "meaning is determined for individual ones of the words and phrases, resulting in statements of meaning, and the resulting meaning statements are linked, providing meaning for the message." as claimed. Applicant points out that systems currently available on the market rely on probability calculations regarding the common occurrence of sequences of letters or character strings. However, the meaning of the analyzed character strings cannot be ascertained or described thereby. In contrast thereto, CES of the present invention, ascertains the meaning of verbal messages, including the consequences of actions and events.

Mast provides answers to text input questions or search topics. Mast describes a framework for the representation of declarative and procedural knowledge based on a suitable definition of a semantic network. In the art of Mast three types of nodes are distinguished. The nodes model concepts, classes of concepts or modified concepts, which allow the representation of constraints resulting from actual data, or are descriptions of individuals. Concepts, as disclosed in Mast represent classes of objects, events, or abstract conceptions, for example, syntactic constituents, deep cases or verb frames. Links are then used to express relations between the nodes. Applicant argues that the linking of nodes, as described in Mast, cannot constitute a determined meaning for individual ones of words and phrases, resulting in statements of meaning, and the resulting meaning statements are linked, providing meaning for the message, as claimed.

Applicant points out that the present invention, as claimed concentrates on the concept of understanding the meaning of text or audio input. Applicant argues that the present invention does not utilize syntactic knowledge, as in Mast. One aspect of the present invention is to intentionally not use any kind of syntax/grammar knowledge to determine meaning. In applicant's invention, as claimed, no syntactic constituents are searched for and combined, as in Mast. In applicant's invention each word is first considered isolated. For each word or string of characters an isolated notational meaning is extracted.

Applicant argues that it would not have been obvious to utilize the teachings of Mast to render the unique features of the present invention. Applicant points out that the system of Mast and the present invention use completely different mechanisms, for example, Mast uses no cognitive processes, as in the present invention. Additionally, both inventions have completely different objectives; the present invention does not establish dialog, as in Mast, therefore, there is no motivation to combine without hindsight knowledge of applicant's invention. Applicant's invention focuses on understanding and forwarding extracted and notational meanings for the generation of technical control commands.

Applicant believes independent claims 23 and 35, as amended and argued, are easily patentable over the art of Mast. Claims 27 and 39 are herein cancelled. Claims 24-26, 28-34, 36-38 and 40-46 are patentable on their own merits, or at least as depended from a patentable claim.

Regarding claims 25 and 37, applicant argues that the passage of Mast, relied upon by the Examiner to reject said claims, makes absolutely no reference to avoiding a double meaning of a certain term or finding the correct meaning by the nature of the linked-concept meaning statement. Mast, page 183, left column, uses a dialog model for verifying inquiries.

Regarding claims 34 and 46, applicant argues that the knowledge bases of Mast cannot possibly provide an artificial language intelligence (ALI) module having cognitive routines of various classes, including routines for extraction of meaning,

context-bound modification, context-bound association, and logical inferences, the ALI module making the routines available to the extractor, and other modules of the system. Applicant argues the knowledge bases are obviously cited by the Examiner in order to derive, therefrom, the presence of cognitive routines, as claimed, but each knowledge base includes data processes that cannot be understood as cognitive processes, as claimed.

Regarding claims 24 and 36, applicant disagrees with the Examiner's interpretation of Gorin. Gorin refers to acoustic speech recognition. The portion of Gorin relied upon by the Examiner, 5300 and 5500, merely refers to a known probability value, which must be exceeded in order to classify a declaration as not understood. Applicant argues, as mentioned above, that no probability values are used in the system. Further, applicant argues that a logically false statement or declaration is not the same as a statement or declaration which cannot be understood by the system. As previously argued, Mast fails to teach a linked meaning statement, as claimed.

Regarding claims 31 and 43, Mast and Shimormura fail to teach a system for control of technical systems, including robotic systems, further comprising a virtual realizer recognizing meaning of the linked meaning statements for generating commands for the technical systems. Shimormura refers to acoustical dialog systems. The command generation according to the present invention has nothing to do with a speech synthesizer or with a topic manager and also does not suggest, "... the purpose of carrying out conversation with the user", as in Shimourma. Therefore, there is no motivation to combine. Applicant also disagrees with the reasoning and interpretation of the art, provided by the Examiner, to reject the balance of applicant's dependent claims, as dependent claims are patentable at least as dependent from patentable claims. Applicant believes claims 23 and 35 are clearly patentable over Mast.

Summary

As all of the claims, as amended and argued above, have been shown to be patentable over the art presented by the Examiner, applicant respectfully requests reconsideration and the case be passed quickly to issue.

If any fees are due beyond fees paid with this amendment, authorization is made to deduct those fees from deposit account 50-0534. If any time extension is needed beyond any extension requested with this amendment, such extension is hereby requested.

Respectfully submitted,
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